

REMARKS

Claims 1, 4, 7, 12-16 and 19-22 are pending in this application. Claims 1, 16, 19, 21 and 22 are in independent form. Favorable reconsideration is respectfully requested.

In the outstanding Office Action, Claims 1, 3, 4, 7, 12-16 and 19-22 were rejected under 35 U.S.C. § 112, first paragraph, as not being supported by sufficient written description in the application as filed.

During a telephone interview with the undersigned attorney on December 7, 2006, the Examiner agreed that Claims 1, 3, 4, 7, 12-16, and 19-22 are supported by the application as filed.

In particular, the Examiner agreed that the features (of Claim 1, for example) reciting that saturation conversion characteristics are based on two conversion lines, and that the second conversion line is set “independently” of the first conversion line, are supported by the specification.

The Examiner also agreed that there is support in the specification for the features (of Claim 1, for example) reciting that a saturation conversion characteristic generating unit is arranged to generate saturation conversion characteristics on the basis of (1) the first conversion line, for the low-saturation side, from the minimum output value to the intersection of the first and second conversion lines, and (2) the second conversion line, for the high-saturation side, from the intersection of the first and second conversion lines to the maximum output value.

Applicants kindly thank the Examiner for mailing an Interview Summary on December 7, 2006 stating that the specification (e.g. page 19, lines 19-25) shows support for two conversion lines. Applicants understand that the Examiner will withdraw the rejection under

Section 112, first paragraph.

Claims 1, 3, 4, 7, 12-16, and 19-22 were objected to for the reasons given in paragraph 5 of the Office Action. Based on the telephone Interview conducted on December 7, 2006, Applicants understand that the Examiner will withdraw this objection as well.

Claims 1, 4, 7, 12-16, and 19-22 also were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent 6,031,543 (Miyashita et al.).

During the telephone Interview conducted on December 7, 2006, the Examiner stated, as set forth in the Interview Summary, that he would need to further consider the arguments presented in favor of patentability, and the Examiner requested that the patentability arguments be re-submitted. Applicants have complied with this request below and have addressed the Examiner's comments in the Office Action dated August 8, 2006.

Applicants strongly believe that each of the independent claims is clearly allowable over Miyashita et al., for at least the following reasons.

Claim 1 is directed to an image processing apparatus in which a saturation calculation unit is arranged to calculate saturation information of an image. A first setting unit is arranged to set a first conversion line for a low-saturation side, wherein the first conversion line converts a minimum input value of a saturation of the image to a minimum output value. A second setting unit is arranged to set a second conversion line for a high-saturation side, wherein the second conversion line converts a maximum input value of the saturation of the image to a maximum output value. According to Claim 1, it should be noted that the second conversion line intersects the first conversion line and is set independently of the first conversion line. Moreover, a saturation conversion characteristic generating unit is arranged to generate saturation

conversion characteristics on the basis of (1) the first conversion line, for the low-saturation side, from the minimum output value to the intersection of the first and second conversion lines, and (2) the second conversion line, for the high-saturation side, from the intersection of the first and second conversion lines to the maximum output value. A saturation conversion unit converts the saturation of the image on the basis of the saturation conversion characteristics generated by the saturation conversion characteristic generating unit.

The general nature of Miyashita et al. has been discussed adequately in previous papers, and it is not believed to be necessary to repeat that discussion.

Notably, in Claim 1, there are two conversion lines, and the second conversion line intersects the first conversion line and is set independently of the first conversion line. Further, saturation conversion characteristics are generated on the basis of (1) the first conversion line, for the low-saturation side, from a minimum output value to the intersection of the first and second conversion lines, and (2) the second conversion line, for the high-saturation side, from the intersection of the first and second conversion lines to a maximum output value.

These features of Claim 1 are not found in Miyashita et al., and indeed, the Examiner has conceded (for example at pages 2 and 3 of the Office Action dated January 24, 2006) that Miyashita et al. discusses a single saturation curve. The Office Action dated August 8, 2006 states, at page 2: “Miyashita et al. teaches second conversion line intersects first conversion lines (FIG. 29-31 and column 9, lines 54-63) and therefore second conversion line is independent of the first conversion line...” At page 5 of the Office Action dated August 8, 2006, the Examiner cites Figs. 16, 27C, 29, and 31 of Miyashita et al.

Applicants submit, however, that Miyashita et al. does not teach or suggest two

conversion lines. Applicants will now address these cited portions of Miyashita et al.:

(1) In Fig. 16 of Miyashita et al., the user can correct saturation by changing the size of the reference circle 106. However, the conversion curves of “a” and “b” (104 and 105, respectively) correspond to only a single parameter, i.e. the change in size of the reference circle, and both the low-saturation side and the high-saturation side are converted using only that single parameter.

(2) In Fig. 29 of Miyashita et al., when an operating lever 117 is shifted in the positive direction, the half tone curve swells upward to form a curve of the middle up type shown in Fig. 27C. However, the half tone curve corresponds to only a single parameter controlled by operating lever 117, and both the low-saturation side and the high-saturation side are converted using only that single parameter.

(3) In Fig. 30 of Miyashita et al., when an operating lever 117 is shifted in the negative direction, the half tone curve swells downward to form a curve of the middle down type shown in Fig. 27C. However, the half tone curve corresponds to only a single parameter controlled by operating lever 117, and both the low-saturation side and the high-saturation side are converted using only that single parameter.

(4) In Fig. 31 of Miyashita et al., the lower and upper limits of a range over which a selected curve is applied can be changed based on changing the positions of the levers. However, while the range width of conversion of a selected curve may be set, Miyashita et al. does not independently set a first conversion line for a low-saturation side and a second conversion line for a high-saturation side.

As can be seen, Miyashita et al. uses only a single parameter in its various

conversions, and therefore Applicants submit that nothing in Miyashita et al. would teach or suggest two conversion lines. Since Miyashita et al. does not independently set a first conversion line for a low-saturation side and a second conversion line for a high-saturation side, the Miyashita et al. method is not able to separately manipulate conversion characteristics at a low-saturation side and a high-saturation side.

Applicants have found nothing in Miyashita et al. that would teach or suggest that two conversion lines are set, in which the second conversion line intersects the first conversion line and is set independently of the first conversion line, and saturation conversion characteristics are generated on the basis of (1) the first conversion line, for the low-saturation side, from a minimum output value to the intersection of the first and second conversion lines, and (2) the second conversion line, for the high-saturation side, from the intersection of the first and second conversion lines to the maximum output value, as recited in Claim 1.

Accordingly, for at least these reasons, it is believed plain that Claim 1 is allowable over Miyashita et al.

Each of the other independent claims recites features which are similar in many relevant respects to those discussed above with regard to Claim 1, and each is deemed allowable over Miyashita at least by virtue of the arguments advanced above with regard to that claim.

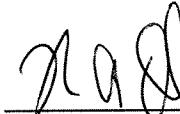
A review of the other art of record has failed to reveal anything which, in Applicants' opinion, would remedy the deficiencies of the art discussed above, as a reference against the independent claims herein. Those claims are therefore believed patentable over the art of record.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration or reconsideration, as the case may be, of the patentability of each on its own merits is respectfully requested.

In view of the foregoing remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,



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